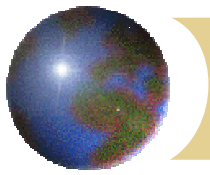


An Overview of the Production, Health Risks, and Potential Exposure to Vermiculite Attic Insulation

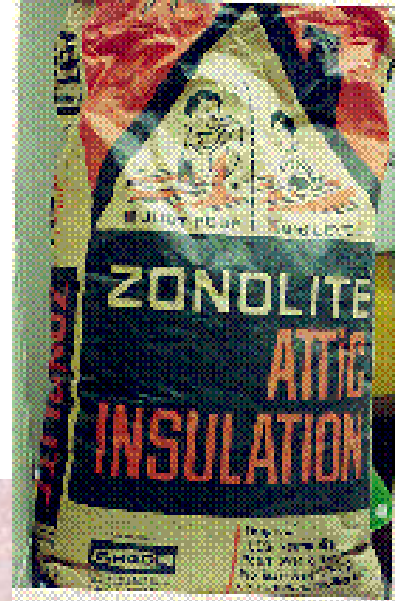
Michigan Department
of Community Health

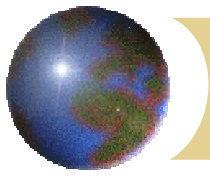


Erik R. Janus
Toxicologist



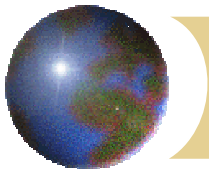
The story starts in a mine in western Montana ...



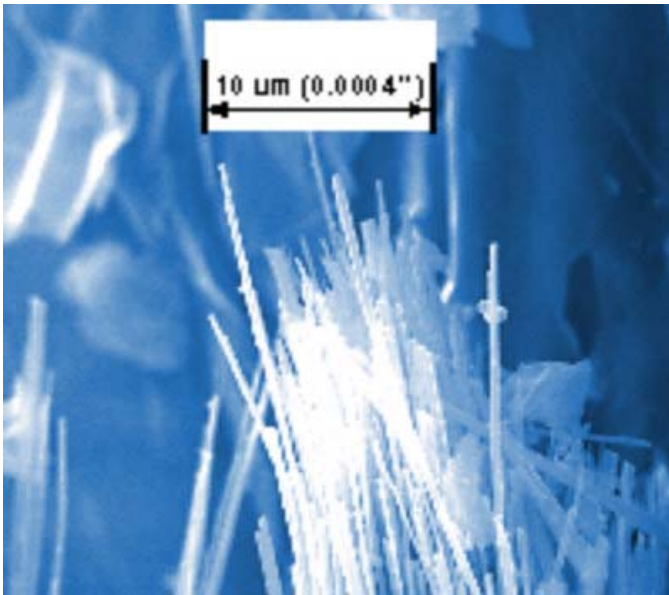


... and continues in Dearborn, Michigan (Wayne County)



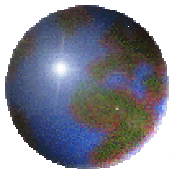


The problem with Zonolite®



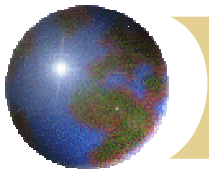
Vermiculite ore was found to be 3 to 7% tremolite by weight; waste material likely contains much more!

- ❖ The mine in Libby provided ~80% of world supply of vermiculite
- ❖ Naturally contaminated with tremolite/actinolite asbestos ("Libby asbestos")
- ❖ Expansion ("exfoliation") process releases friable fibers



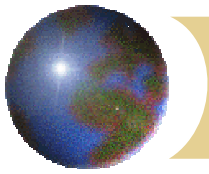
Vermiculite Attic Insulation (VAI)





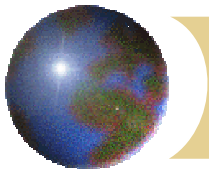
What are the health risks?

- Identical to those faced from asbestos exposure:
 - Lung cancer, mesothelioma (cancer of the lining of the lungs), asbestosis, and other disorders of the lung and its lining (pleura)
 - Latency periods generally 10-40 years after exposure
- Tremolite asbestos fibers are retained in the lung longer than others, are more resistant to breakage, and considered “more toxic”



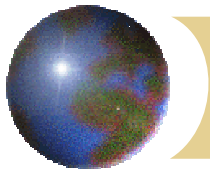
What is the proof?

- ✿ Epi studies of Libby miners and millers showed chronic exposure to airborne tremolite increases risks of lung disorders
- ✿ Other epi studies in regions where:
 - ▣ tremolite whitewash used in homes
 - ▣ areas of high surface deposits
- ✿ Animal toxicological studies



Why are we looking at Dearborn?

- ✚ Libby mine bought by W.R. Grace in 1963 and started shipping ore to various expansion plants in U.S.
- ✚ Dearborn facility processed over 200,000 tons of ore from 1966 to 1988
 - ▣ One of the “top sites” in terms of ore processed
- ✚ Health findings from Libby and other processing sites prompted ATSDR “National Asbestos Exposure Review”

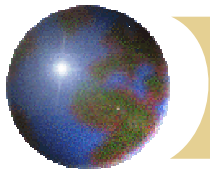


ATSDR/MDCH Health Consultation

- Released in October 2004

- Conclusions:

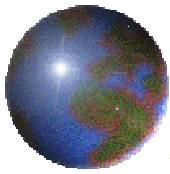
- Workers were exposed to dangerous levels of asbestos at the former W.R. Grace facility while it processed vermiculite ore
- Household contacts of workers were also exposed to dangerous levels
- Occasional contact with low levels of asbestos in soil is possible today



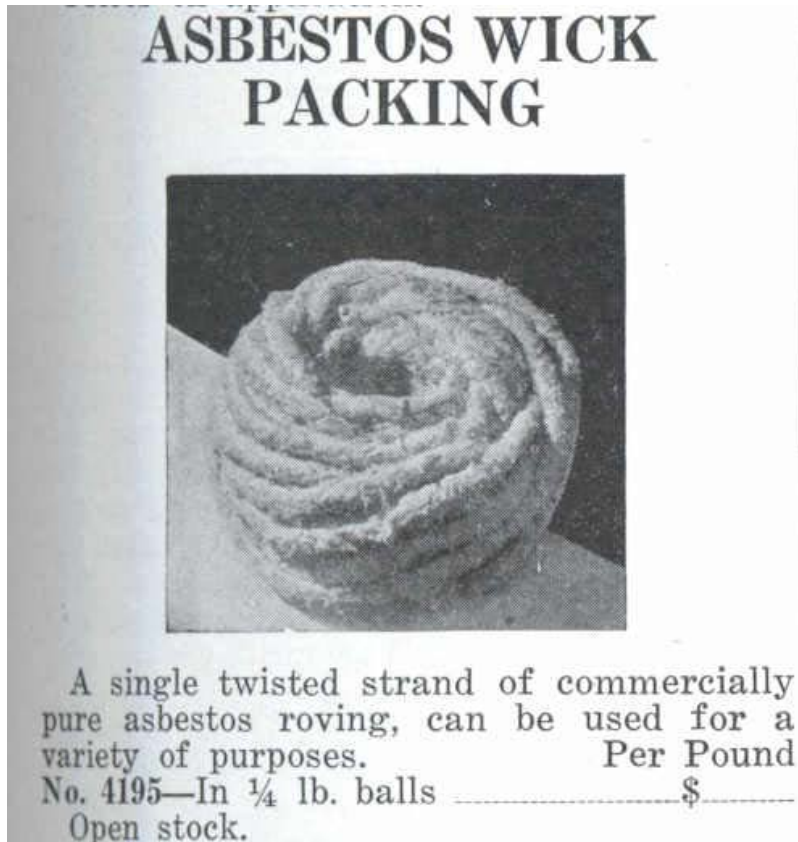
Why am I here today?

- ➊ Numerous sources have estimated that as many as 700,00 homes in Michigan may have VAI in the attic/walls
- ➋ Recently, EPA concluded that disturbing VAI can pose asbestos exposure risk



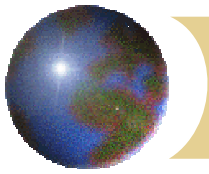


Why am I here today?



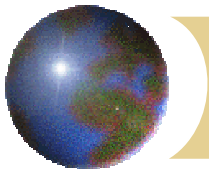
- ✚ To provide all the resources and info you may need on this issue
- ✚ To start my outreach strategy
- ✚ To take any info or suggestions you may have

This is very likely just the tip of the iceberg....



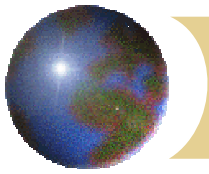
What is the likelihood of exposure?

- ❖ Workers of WR Grace/Dearborn and their household contacts are considered exposed
- ❖ You *probably* were exposed if you lived near the site AND had direct contact with ore, insulation, waste materials, or dust emissions from the plant



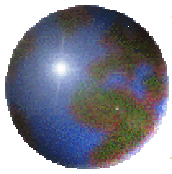
What is the likelihood of exposure?

- ✚ You *probably* were exposed if you had direct contact with waste piles (e.g., if you played on them as a child)
- ✚ You *probably* were exposed if you brought ore or waste material home for use in your driveway, garden, etc.



What about asbestos exposure from VAI?

- ❖ EPA demonstrated that disturbance of VAI can create a potential asbestos exposure risk (but also said more study was needed)
- ❖ Dose, route, duration and frequency of exposure is crucial
- ❖ Type of fiber and length of fiber also correlated with toxicity



Resources for VAI questions

- ✿ MDCH VAI web site (1-800-648-6942)

<http://www.michigan.gov/vai>

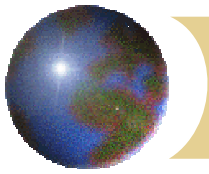
- ✿ ATSDR Asbestos/NAER web sites

<http://www.atsdr.cdc.gov/asbestos/index.html>

<http://www.atsdr.cdc.gov/naer/index.html>

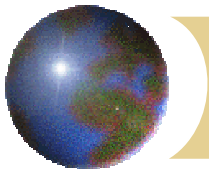
- ✿ EPA Vermiculite/Asbestos web site

<http://www.epa.gov/asbestos/verm.html>



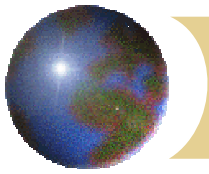
Good resources to have on hand

- ⊕ MDCH/ATSDR health consultation fact sheet/summary
- ⊕ MDLEG Asbestos Program contact info
 - ⊕ (517) 322 1320 or <http://www.michigan.gov/asbestos>
- ⊕ ATSDR Vermiculite Consumer Products fact sheet
- ⊕ ATSDR ToxFAQ for Asbestos
- ⊕ EPA/ATSDR Vermiculite Attic Insulation fact sheet



Concluding Statements

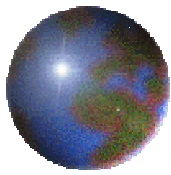
- ✚ There is potential for asbestos exposure in homes with VAI
- ✚ Disturbance of VAI can release friable, loose asbestos fibers
- ✚ Sufficient exposure to fibers in VAI can lead to cancer and non-cancer health effects



Concluding Statements



- ❖ People need to know that VAI represents a source of friable asbestos in the home
- ❖ Avoid/reduce exposure to VAI:
 - ❑ Don't disturb it!
 - ❑ Avoid unnecessary trips to attic
 - ❑ Hire trained professionals to remove, sample, or do renovation/repair work if needed
 - ❑ Seal cracks or holes from attic space



Questions, Concerns, or Comments?

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<http://www.michigan.gov/vai>

